

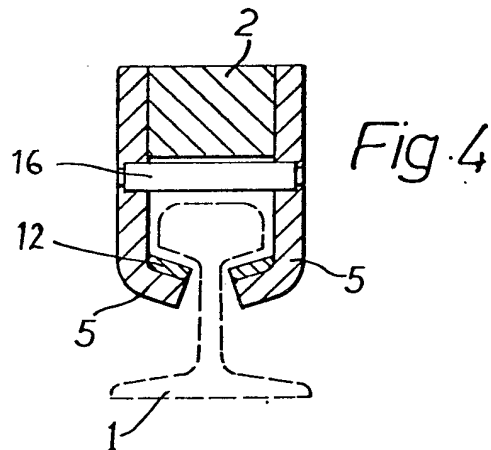
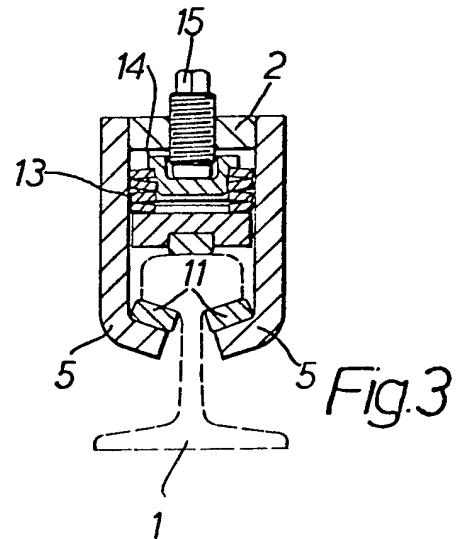
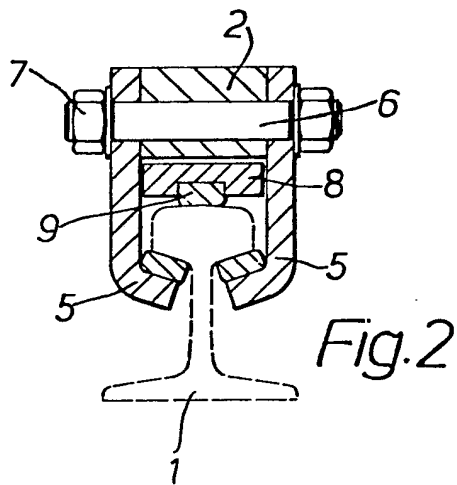
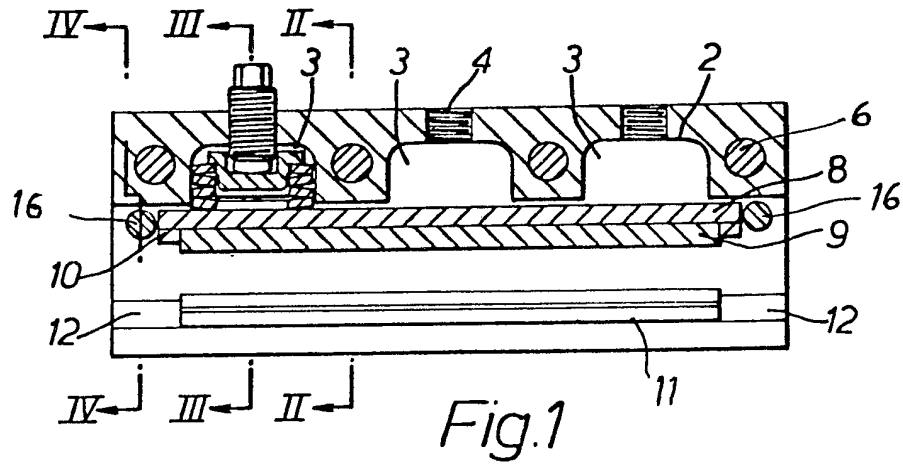
- (54) Brake Retarder Shoe**

head and an upper friction pad 9 engages the upper face of the head. Adjustable (by means of a bolt 15) spring washers 13 between the central body portion 2 and a carrier 8 for the upper friction pad 9 urge the upper pad 9 downwardly onto the rail head and pull the lower pads upwardly through the side plates 5, into engagement with the underside of the head of the rail



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

אברהם שטח



SPECIFICATION Brake Retarder Shoe

The present invention concerns a retarder shoe for a friction buffer as used on railways.

5 It is known to provide railways with friction buffers which can give way on impact from a train, waggon or the like and bring about a progressive halt. Such buffers can be secured and mounted on retarder shoes which are then
10 located on the rail head. The aim of the invention is to provide an improved form of retarder shoe.

According to the present invention a retarder shoe comprises a shoe body having a central portion and two depending side portions each terminating in an inturned flange supporting and
15 locating a lower friction pad to cooperate with the underside of the head of the rail, a friction pad carrier beneath the central body portion, supporting and locating an upper friction pad to cooperate with the upper surface of the head of the rail, spring means between the central body
20 portion and the friction pad carrier, and means for varying the compression of the spring means to vary the frictional engagement of the friction pads with the rail. The spring means, which are preferably spring washers, bear directly downwards on the pad carrier for the upper
25 friction pad to urge the upper pad downwardly into frictional engagement with the rail. Reaction forces transmitted through the central body portion and the depending side portions urge the lower friction pads upwardly against the underside of the head of the rail.

Advantageously the spring means comprise a number of stacks of spring washers, each located,
35 for example, in a recess in the central body portion. The means for varying the compression of the spring means, which preferably comprises at least one bolt screw-threaded through the central
40 body portion, may then be one such bolt bearing down adjustably on each stack of spring washers.

Drawings

Figure 1 is a longitudinal section of a retarder shoe; Figures 2, 3 and 4 are respectively sections
45 on X—X; Y—Y; and Z—Z of Figure 1.

A retarder shoe as illustrated is arranged to co-operate with a rail track, the latter being denoted by the numeral 1 in Figures 2 to 4 of the
50 drawings.

The retarder shoe comprises a central body portion 2 which is shaped to form three separate compartments 3 with three threaded bores 4
55 each leading into a respective one of the compartments 3.

Two substantially J-shaped side plates 5 are secured one at each side of the central body 2 by means of bolts 6 with washer and nut assemblies
60 7 at each end of the bolt.

A friction pad carrier 8 is located between the plates 5 and between the central body 2 and the head of the rail. The carrier 8 is formed with a central longitudinal groove which extends the

length of the carrier 8 and carries a friction pad 9. The ends of the groove are blanked by end stops
65 10 which are welded in place.

Two further friction pads 11 are carried on the lower inwardly inclined portion of each side plate 5. The pads 11 are likewise located between end
70 stops 12 which are welded in position. The pads 11 bear against the underside surfaces of the head of the rail.

A Belleville washer assembly 13 with a thrust cap 14 is arranged within each compartment 3 in the body 2. A thrust bolt 15 is in screw threaded
75 engagement with each bore 4 and rotation of the bolt effects an expansion or compression of the associated washer assembly 13 to alter the frictional engagement between the pads 9 and 11 and the rail 1.

To adjust the friction, the three bolts 15 are tightened until the washer assemblies are solid. Each bolt 15 can then be slackened by rotating a
80 required number of degrees to reduce the spring washer compression preferably to 75% of its maximum value.

A rod 16 extends the side plates 5 and adjacent each end of the friction pad carrier 8. The rods 16 are adapted to take the thrust
90 exerted by the carrier 8 in the event that the carrier 8 is displaced longitudinally on an impact. As a result, no deforming stress or strain is imparted to the central body 2.

In use, a buffer assembly is mounted on a plurality of such retarder shoes.

95 Claims

1. A retarder shoe for a railway friction buffer, comprising a shoe body having a central portion and two depending side portions each terminating in an inturned flange supporting and
100 locating a lower friction pad to cooperate with the underside of a head of the rail, a friction pad carrier beneath the central body portion, supporting and locating an upper friction pad to cooperate with the upper surface of the head of the rail, spring means between the central body
105 portion and the friction pad carrier, and means for varying the compression of the spring means to vary the frictional engagement of the friction pads with the track.

2. A retarder shoe according to claim 1, wherein the spring means comprise spring washers.

3. A retarder shoe according to claim 2, wherein the spring means comprise more than
115 one stack of spring washers.

4. A retarder shoe according to claim 3, wherein each stack of spring washers is located in a recess in the central body portion.

5. A retarder shoe according to any preceding claim, wherein the means for varying the compression of the spring means comprises at least one bolt screw-threaded through the central
120 body portion to bear on the spring means.

6. A retarder shoe according to any preceding

claim, wherein the depending side portions of the shoe body are side plates secured to the central body portion by bolts.

7. A shoe retarder substantially as described
5 and illustrated herein with reference to the drawings.

Printed for Her Majesty's Stationery Office by the Courier Press, Leamington Spa, 1981. Published by the Patent Office,
25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.